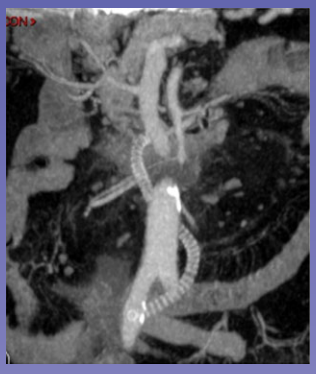
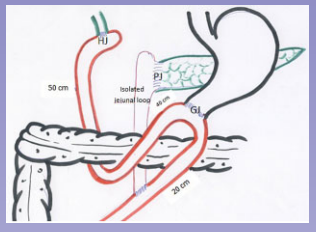
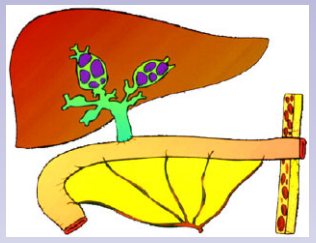
Highlights in this issue



Bhangui *et al*., p. 723



El Nakeeb *et al*., p. 713



Co *et al*., p. 776

Desperate situations require desperate measures: rescuing the de-arterialized liver

It is thankfully a very rare occurrence when the liver becomes de-arterialized in a manner that will not permit conventional arterial reconstruction. The two scenarios where this may occur are in early hepatic arterial thrombosis after liver transplantation and in the setting of elective resectional surgery either to deal with arterial complications or where extensive arterial resection is required to achieve tumour clearance. In such scenarios, loss of the liver arterial supply risks massive hepatic necrosis and severe biliary injury with stricturing if the patient survives. In this edition of *HPB, Bagui et al.* from the Paul Brousse Hospital, describe their experience of portal vein arterialization (PVA) as a rescue procedure for patients in both of the previously mentioned scenarios. PVA was performed either by performing a direct arterio-portal anastomosis or by using a synthetic or natural arterial conduit. In this series intrahepatic arterial signals were obtained after the procedure and early survival was excellent. PVA is however, not without problems and the arterialization results in greatly increased portal venous pressure with inherent risk of bleeding and late hepatic fibrosis. In the setting of early hepatic artery thrombosis after liver transplantation, the procedure has obvious utility in converting patients from potentially requiring emergency re-transplantation or facing death to elective transplant recipients. In the setting of cancer surgery the procedure must be considered quite differently as the 'bridge' element to transplantation is rarely possible. In dealing with serious arterial complications of cancer surgery, PVA seems a justifiable desperate measure. The question for elective cancer surgery is whether the outcomes and survival of PVA justify the poor prognosis that tumours with extensive arterial involvement frequently carry.

Stephen J Wigmore

Isolated Roux loop pancreaticojejunostomy versus pancreaticogastrostomy after pancreaticoduodenectomy: a prospective randomized study

With a goal of minimizing post operative pancreatic fistula (POPF), what is the best and safest way to reconstruct the left pancreatic remnant after pancreaticoduodenectomy (PD)? Several safe anastomotic techniques are available and have been scrutinized and compared for years. Still, no consensus exists. Can isolating the pancreaticojejunostomy (IR-PJ) to its own Roux limb protect from POPF? *Nakeeb et al.* from Mansoura, Egypt compared such a technique with pancreaticogastrostomy (PG) in a prospective randomized trial of 90 patients over 2.5 years. Theoretically, avoiding bile-induced activation of pancreatic juices with IR-PJ may be more protective from POPF, the primary outcome of the trial. Secondary outcomes included operative time, days to oral feeds, postoperative morbidity and mortality, and exocrine and endocrine pancreatic functions. POPF rates and severity were the same regardless of IR-PJ or PG, but IR-PJ significantly extended operative times due to the additional enteroenterostomy required. Mortality was high (7.8%) overall, but not different between groups. Complication rates did not vary either. Perhaps most notably, severe steatorrhea at 1 year post surgery was significantly higher in PG than IR-PJ patients. There were no subgroup analyses offered, for example, for higher risk patients who can be identified through contemporary POPF risk scoring. And so, the search continues. Theoretical appeal aside, IR-PJ offers little to warrant lengthening an already complex operation.

Mark Callery

Intrathecal morphine for patients undergoing liver resection: more to be gained than lost

In this issue of *HPB, Kasivisvanathan et al.* describe the outcomes of a single centre observational study comparing epidural analgesia (TEA group) to intrathecal morphine with fentanyl patient controlled analgesia (ITM with f-PCA group) for patients undergoing hepatic resection. Although not randomised, the study seemed well conducted with the two groups comparable, and with important clinical endpoints identified. Those patients receiving ITM with f-PCA were less likely to require vasopressors and had a lower requirement for post-operative fluids. They subsequently had a reduced overall hospital stay although their pain control was poorer than the TEA group in the early post-operative period. Many of these findings are consistent with previous studies including those recently published in *HPB*, however what is potentially novel to this paper is the observation of an increased central venous pressure and blood loss in the ITM with f-PCA group. This increase in blood loss would appear to be clinically relevant in terms of volume with 16/37 patients losing between 500–1000 mls intra-operatively. Yet this did not appear to translate into a detrimental clinical effect as the rate of intraoperative and post-operative transfusion seemed equivalent. Similarly, the reduction in pain scores in the first 24 hours although statistically significant did not appear to be clinically significant as neither decrease was greater than 30 mm on the VAS score. Thus, it would seem that ITM has a lot to offer and little to lose but for those considering its use, some thought may need to be given to ways in which the downsides could be offset. Such interventions could potentially include the addition of pre resection venesection or caval clamping to help lower the CVP, or the addition of wound catheters or non-steroidal analgesia to help reduce pain in the immediate postoperative period.

Saxon Connor